

m/23/016

106.6 Plan for protecting and re-depositing existing soil

Any soil removal will be done with a trackhoe. All the soil and any plant matter will be stockpiled together in an area that will be undisturbed by mining activities. The location of this stockpile will be in an area that has already been disturbed by mining immediately below the active mine area. A berm will be built around the base of the stockpile to prevent erosion. The berm will also be situated so that storm water will not erode the pile. The Soil will be seeded at the end of each season with a quick cover of grass and legumes in order to prevent erosion. The seed mix for the quick cover vegetation will be one recommended by DOGM and will be broadcast at a rate of 6.76 PLS lbs./acre. Soil placement or re-deposition will also be accomplished with the use of a trackhoe and shall be placed at a depth of six inches. Because a trackhoe will be used to place the soil the surface will be left somewhat uneven, however, the uneven surface will be beneficial in preventing erosion. The uneven surface will also help in re-vegetation efforts by holding seeds in depressions higher on slopes and in a more uniform distribution.

Soil that has been removed from roadways and stored on the shoulders of the road will be replaced using a trackhoe. The soil will be placed to match the original slopes and grades as close as possible. This material will be tested for nutrients and if needed, a soil amendment of composted manure at the rate of 10 tons per acre will be added.

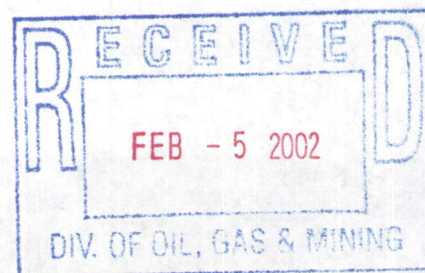
Thickness of soil material to be salvaged and stockpiled: ___ 0 – 40 ___ in.

Area from which soil material can be salvaged: (show on map) ___ 26 ___ acres

Volume of soil to be stockpiled: ___ 29,730 ___ cy

Volume of soil already stockpiled: ___ 19,300 ___ cy

Much of the soil that will be used for reclamation of the active mining has already been removed from the mining area and stockpiled below the road that enters the active mine. When reclamation is done any extra soil will used to increase the depth of replaced soil from 6" to greater than 6".



III - 8



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Minimizing Hazards

Shafts and tunnels – none on site.

Disposal of trash - A small 20' X 20' "boneyard" will be kept on site during the life of the operation. The "boneyard" will be kept near the crusher. All trash will be hauled off site and disposed of properly. No trash or equipment parts, etc. will be buried. A "port-a-potty" will also be used and maintained for all employees.

Capping holes - any exploratory holes that have been drilled will be consumed by the extraction of the gypsum. Drill holes made for blasting purposes will be consumed in the blasting process.

Posting signs - The following signs will be posted in appropriate places:

Danger High Bank

Hard Hat Area

Danger Flammable Liquid

No Trespassing

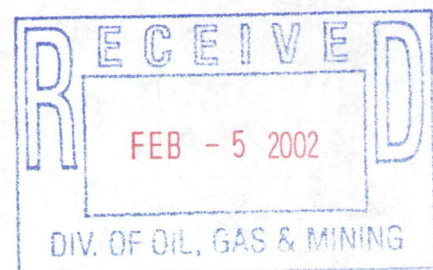
Berms and fences – 18" Berms will be used to divert storm water away from disturbed areas to help prevent erosion. A fence will be placed above highwall areas to prevent access. Entrance to the site will be controlled by gates along with the natural vegetation and steepness of the site.

Minimizing Damage to Drainage

Care will be taken to avoid disrupting the natural drainage whenever possible. Any drainage that is impacted will be restored as close to original condition and shape as possible. Berms will be used to keep runoff from disturbed areas from flowing directly into the drainage system, thus helping to avoid silting. Wherever drainage is disturbed the new channel will be lined with Rip-Rap to help prevent erosion.

Minimizing Sediment and Erosion

Berms will be constructed at the edges of the disturbed areas to control any runoff water. The berms will prevent runoff from the disturbed areas from flowing directly into the drainage system, thus helping to avoid silting. It is expected that some runoff will flow down the main access road and around the pad used for processing and storing material. A small sediment basin will be constructed where any suspended load in the storm water will have a chance to drop out before the water enters the main drainage system.



109.2 Wildlife habitat and endangered species.

“Wildlife

A site-specific search was done using the State of Utah, Division of Wildlife Resource's GIS database. The search focused on high-profile, sensitive, rare, threatened and endangered wildlife species.

Results of the search showed that there are a total of five golden eagle nests within a one-mile radius of the project area, three of which were within 0.5 miles from the area. There was no sage grouse habitat in the area. The project area is within the range for black bear. There were no sensitive, rare, threatened and endangered invertebrate species shown to be in the area. The database showed that elk use the area for summer and winter range, but not for calving. Although deer summer range is somewhat higher and not on the project area, the site is used by them for winter range. The area, however, is probably not used by deer for their fawning activities. Finally, the Chicken Creek riparian area is used extensively by many bird species.

Threatened, Endangered & Sensitive Species

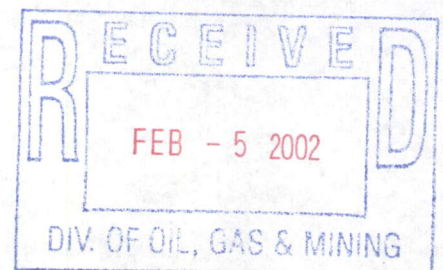
Other than the bald eagle nests described above, no federally listed threatened or endangered (or sensitive) plant or animal species were observed or are known to be present on this study site.”

Patrick Collins, PhD., Mt. Nebo Scientific, Inc., Vegetation & Wildlife of the Levan Gypsum Mine, Page 7.

Mining will affect some of the range for larger species and will diminish the food supply somewhat. The mining activity will however, open pathways which will allow access to the more remote areas of the hillside. The loss of range will be restored when reclamation takes place.

The potential impacts on bald eagles would be the loss of some habitat for prey species. The loss of this habitat will be restored and may even be enhanced when reclamation takes place. Noise and dust from the operations could also have some impact although the extent is not known. The plant will be operated in such a manner as to minimize dust through the use of water sprays at the crushing equipment and magnesium chloride on the roads. The plant will also be operated only during daytime hours and only during the warmest months of the year when the mine is accessible. A yearly review of the Eagles' nests will be conducted in accordance with the recommendations of the study. The inspection of nests will expand to include the nest mentioned near the upper mining area when activities proceed to that point.

The riparian habitat that is found in this area will not be disturbed. There should be no effect on water fowl.



109.4 Slope stability, erosion, air, public health and safety.

Slope Stability and Erosion

Slope stability will not be a major factor at this site because the soils are only 0" to 3 feet in depth. The bedrock is close to the surface and is in fact exposed in many locations. The bedrock is massive and is not highly fractured therefore relatively little mass movement will occur.

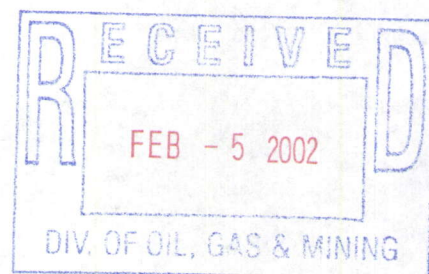
Erosion will be controlled through the use of berms. The berms will be used to keep storm water from running off directly into the drainage system and to keep storm water from running on to soil storage areas. Because the mine is located primarily on bedrock there will be relatively small amounts of material from disturbed areas that would be eroded.

Air Quality

Because of the nature of the material that is being mined, some dust will be created in excavation, transportation and processing the gypsum. During excavation care will be taken to reduce the amount of dust generated by using good methods of loading and by reducing the amount the material is handled before loading. The dust generated during transportation can be reduced by the use of magnesium chloride sprayed directly onto the road surface. A water tank will be maintained at the crusher so that spray bars can be used to suppress dust while material is being processed. Geneva Rock will maintain current air quality permits from the Division of Air Quality (DAQ).

Public Health and Safety

The mine is registered with the Mining Safety and Health Administration (MSHA) and all rules and regulations will be observed. Workers at the mine are expected to abide MSHA rules as well as company policies regarding safety for their own safety as well as that of the public. Other safety measures will include limiting access to the site with gates. Signs will be posted and a fence consisting of T posts and 3 strands of barb wire will be constructed above high bank areas to warn and protect hikers and hunters. Other signs will be installed throughout the site in appropriate locations including "Hard Hat Area", "No Trespassing" and "Danger Flammable Liquid".



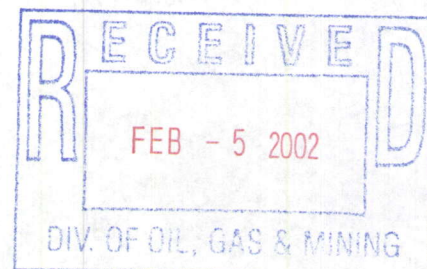
110.1 Current land use and post-mining land use.

Current or pre-mining land use(s) [other than mining]: Wildlife Habitat

List future post-mining land use(s) proposed: Wildlife Habitat

The US forest service property will revert back to wildlife habitat.

The private property will also revert back to wildlife habitat.



110.2 Reclamation of roads, highwalls, slopes, etc.

Reclamation of roads

Soil that has been removed from roadways and stored on the shoulders of the road will be replaced using a trackhoe. The soil will be placed to match the original slopes and grades as close as possible. The soil will be tested for nutrients and a soil amendment of composted manure will be added if necessary. Roadway areas will then be seeded with a DOGM approved seed mix

Reclamation of highwalls

A variance will be requested so that highwalls may be left as the final grade for parts of this mine. A report from AGEC will be included with this NOI that details the stability of the slopes that are proposed for this mine. The recommendations listed in that report will be followed including setbacks of the slope face and processes used to mine the material. The benches of the highwalls will be covered with 6" of soil and then hand broadcast seeded. The area will be raked to help cover the seeds.

Reclamation of slopes

Slopes will be graded in such a way as to tie mined areas back into existing slopes. Roadways will also be graded to match the pre-mining slopes from which they were cut. All slopes will be covered with at least 6" of soil and then seeded.

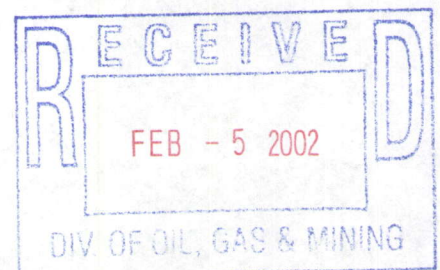
Impoundments, pits and ponds to be left

A small sediment pond will be left near the county road on the lowest level of the mine. The pond will be about 200 square feet, 2 to 2 ½ feet deep and will have a capacity of about 1/100th of an acre foot. The pond will be in the drainage alignment and will be used to drop sediment out of any storm water that goes through it. The outlet will be the same size as the inlet.

Reclamation of impoundments, pits and ponds

There will be a small detention basin built to collect runoff from the stockpile and processing site. The basin will be used to hold runoff water and to act as a sediment trap. The basin has been designed to hold 135 % of a 10-year storm event. The basin will be about 525 square feet, 4 feet deep and will have a capacity of about 77 cy. The basin will be reclaimed at the end of operations.

Note : see copy of engineering calculations.





Customer _____

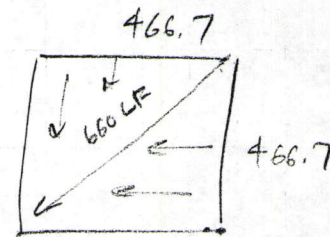
Project _____

Date _____



Levan Pit.

5 Acre square
collect water at one corner.



Distance for $T_c = 660$ ft.

Average Velocity of overland flow on bare ground & 5% slope
= 2 ft/sec (SCS Graph)

$$T_c = 660 \text{ ft} \left(\frac{1 \text{ sec}}{2 \text{ ft}} \right) = 330 \text{ sec} = 5.5 \text{ min.}$$

Calculate Runoff.

Rational Formula

$$Q = C_i A$$

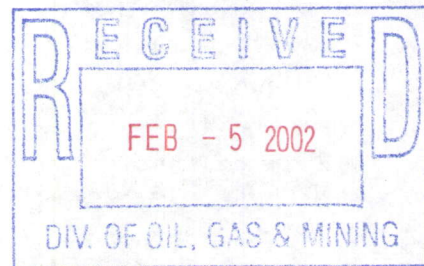
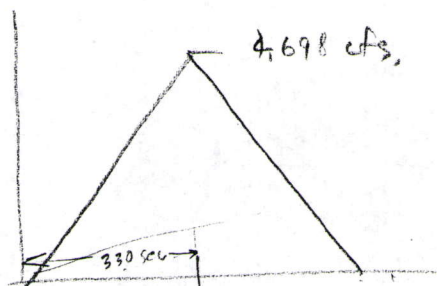
Use $C = 0.30$

$A = 5$ Acres

$\bar{I} = 3.132$ in/hr

$$Q = 0.30 (3.132 \text{ in/hr}) (5 \text{ Acres}) \\ = 4.698 \text{ cfs}$$

Total Runoff



$$V = 4.698 \frac{\text{ft}^3}{\text{sec}} (330 \text{ sec}) = 1,550.34 \text{ ft}^3 = 57 \text{ cu yd.}$$

Reclamation of drainage

Minimal damage will be done to any drainage system. The most impact will be on the lower level where a pad has been constructed for the processing and storage of material. The drainage area for spring runoff and storm events has been shifted to the east but the grade has been relatively unchanged. This drainage will not be reclaimed because the pad will remain in existence after the mining has ceased. The new drainage channel will be lined with Rip-Rap to prevent erosion.

Reclamation of Waste Dumps

No waste material will be generated therefore no reclamation of dumps will need to be completed.

Reclamation of shafts and adits

There are no shafts or adits on the property currently and none will be constructed therefore none will remain when mining is complete.

Reclamation of drill holes

All drill holes will be consumed in the mining process and none will remain when mining is complete.

Reclamation of tailings

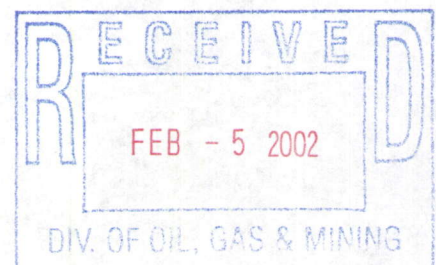
No tailings will be generated therefore none will remain when mining is complete.

Reclamation of leak pads

No leak pads will be constructed therefore none will remain when mining is complete.

Describe the disposition of any stockpiles remaining

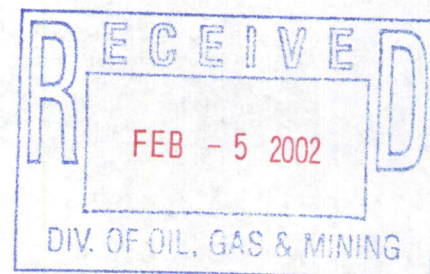
No stockpiles will remain when mining is complete.



110.3 Surface facilities to be left.

There will be no surface facilities left on forest service property. All areas will be reclaimed to the standards set forth by the US Forest Service and the Division of Oil, Gas, and Mining.

The access road to the mine that is on private property will be removed from service and reclaimed. All machinery and support equipment will be removed from the site. The pad that is used for material processing and storage will be re-graded and will then also be reclaimed.



110.5 Re-vegetation, topsoil and planting.

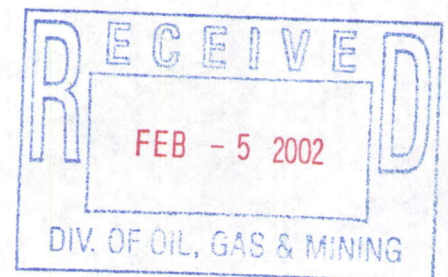
a) Soil Material Replacement

Soil placement or re-deposition will be accomplished with the use of a trackhoe and shall be placed at a depth of six inches. Because a trackhoe will be used to place the soil the surface will be left somewhat uneven, however, the uneven surface will be beneficial in preventing erosion. The uneven surface will also help in re-vegetation efforts by holding seeds in depressions higher on slopes and in a more uniform distribution.

b) Seed Bed Preparation

Seedbed preparation will be accomplished as soil is replaced over the mined areas and as roads are closed. Soil placement or re-deposition will be accomplished with the use of a trackhoe and shall be placed at a depth of six inches. The ground will not be scarified because the working surfaces are almost entirely comprised of bedrock. The soil that is replaced will be placed in a manner that will not compact the material and will leave the surface uneven.

To increase the % OM in the soils an application of 10 ton/acre of composted manure will be placed on top of the soil. The manure will be incorporated into the soil either by manual or mechanical means. Care will be given to not compact the soil prior to seeding.



d) Seeding Method

Seeding will be done using a couple of methods. The majority of the seeding will be done with hydroseeding technology. The seeds will be placed in a tank that contains water and small amount of fibermulch (as a tracer). This mixture will be sprayed out over the soil surface either through a truck mounted sprayer or through the use of hoses. The mixture will be spread evenly and in a density consistent with the requirements of the seed mixture specifications found under the heading "Seed Mixture".

Some seeding may have to be accomplished by hand broadcasting due to the remoteness or inaccessibility of certain areas or to treat small areas that have been disturbed subsequent to hydroseeding. After the seed is broadcast the area will be raked to cover the seed

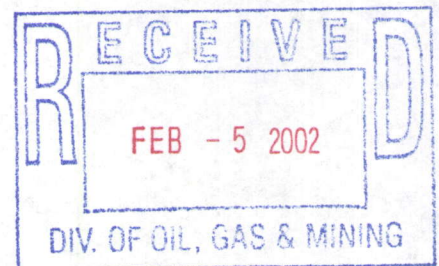
All seeding will be done in the fall of the year when the potential for germination has passed for the season. This will allow the seeds to germinate in the spring where spring precipitation and soil moisture will sustain plants long enough for establishment.

e) Fertilization

To increase the % OM in the soils an application of 10 ton/acre of composted manure will be placed on top of the soil. The manure will be incorporated into the soil either by manual or mechanical means. Care will be given to not compact the soil prior to seeding.

f) Other Revegetation Procedures

The majority of the seeding will be done with hydroseeding technology. The seeds will be placed in a tank that contains water and a small amount of fibermulch as a marker. This mixture will be sprayed out over the soil surface either through a truck mounted sprayer or through the use of hoses. The mixture will be spread evenly and in a density consistent with the requirements of the seed mixture specifications found under the heading "Seed Mixture".

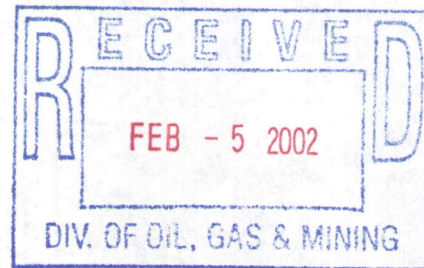


Reclamation Surety Estimate

Geneva Rock Products Inc.

Levan Gypsum

M/023/016 - Juab County



Activity	Quantity	Units	\$/Unit	\$	Cost	\$
safety gates, signs etc	2	ea	200			200
demolition of buildings/facilities	0	cf	0.24			0
debris & equipment-trucking	2	trips	50			100
debris & equipment-dump fees	20	ton	55	—		1,100
debris & equipment-loader	2	hours	166			332
debris & equipment-labor	4	hours	15			60
regrading facilities area	5	acre	364	—		1,820
regrading stockpile slopes	19,300	cy	0.36	—		6,948
ripping dump tops	4	acre	271	—		1,084
ripping stockpile & compacted	5	acre	271	—		1,355
ripping pit floors	31.35	acre	271	—		8,496
ripping pit access roads	6.38	acre	271	—		1,729
creating safety barriers-highwall	1,700	lf	0.12			204
ripping access roads	6.38	acre	271			1,729
regrading access roads	6.38	acre	364			2,322
sidecast material replacement	10,177	lf	1.09			11,093
surface drainage-restore	200	lf	2			400
topsoil -dozer	49,030	cy	0.36			17,651
topsoil -truck	19,300	cy	2.6			50,180
composted manure	42.85	acre	300			12,855
broadcast seeding	5.5	acre	170			935
hydroseeding	37.35	acre	800			29,880
general site cleanup	42.85	acre	50			2,143
equipment mobilization	4	equipment	1000			4,000
supervision	30	days	386			11,580
Sub Total						168,196
10% contingency						16,820
escalator for 5y @ 3.13%/year						15,095
Total						200,111

This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number M0230816 Mine Name Levan Gypsum
Operator Geneva Rock Date 2-5-2002
TO _____ FROM _____

☐ CONFIDENTIAL ☐ BOND CLOSURE ☐ LARGE MAPS ☒ EXPANDABLE
☐ MULTIPUL DOCUMENT TRACKING SHEET ☐ NEW APPROVED NOI
☐ AMENDMENT ☐ OTHER _____

Description YEAR-Record Number

☐ NOI ☒ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

Part of Plan

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ TEXT/ 8 1/2 X 11 MAP PAGES ☐ 11 X 17 MAPS ☐ LARGE MAP

COMMENTS: _____

CC: _____

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Mine Permit Number _____ Mine Name _____
Operator _____ Date _____
TO _____ FROM _____

☐ CONFIDENTIAL ☐ BOND CLOSURE ☐ LARGE MAPS ☐ EXPANDABLE
☐ MULTIPUL DOCUMENT TRACKING SHEET ☐ NEW APPROVED NOI
☐ AMENDMENT ☐ OTHER _____

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☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

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COMMENTS: _____

CC: _____